IN THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

1.   (currently amended) An apparatus for sensing remote load voltages, comprising: a power converter;

a plurality of remote loads, each remote load located in a loop connected to the power converter; and

a feed back loop connected to the power converter, the feed back loop being physically adjacent to the power converter, wherein the feed back loop further comprises a first path and a second path, and the first path and the second path are in parallel;

said first path being connected to one of said remote loads;

and said second path not being directly connected to any of said remote loads, and having a faster response than said first path.

2.   (original) The apparatus of claim 1, wherein the first path further includes a low-pass filter.

3.   (original) The apparatus of claim 1, wherein the first path further includes a high-pass filter.

4.   (original) The apparatus of claim 1, wherein the first path further includes a band-pass filter.

5.   (original) The apparatus of claim 1, further comprising an error

amplifier connected to the feed back loop.

6. (previously presented) An apparatus for sensing remote load voltages, comprising: a power converter;

a plurality of remote loads, each remote load located in a loop connected to the power converter; and

a feed back loop connected to the power converter, the feed back loop being physically adjacent to the power converter, wherein the feed back loop further comprises a first path and a second path, and the first path and the second path are in parallel;

further comprising an error amplifier connected to the feed back loop;

wherein the error amplifier has a gain defined by Gav= (N * Ka) * (weighted average individual loop gains)

wherein,

Gav is the average gain of the error amplifier,

N is the number of loops, and

Ka is a constant gain adjustment factor.

7. (original) The apparatus of claim 1, wherein the first path further comprises a capacitor-resistor network.

8. (currently amended) A method for sensing remote load voltages comprising the steps of:

connecting a remote load to a loop to a power converter;

devising an impedance for a feed back loop according to a weighted factor for the feed back loop; and

connecting the feed back loop to the power converter, wherein the feed back loop is physically closer to the power converter than the remote load; and wherein an additional feedback loop is also connected to the power converter and to the remote load.

9.   (original) An apparatus for sensing remote load voltages, comprising:

means for converting power;

a plurality of means for consuming power, each means for consuming power being located in a loop connected to the means for converting power; and

means for providing feed back to the means for converting power, the means for providing feed back being physically adjacent to the means for converting power, wherein the means for providing feed back further comprises a first conducting means and a second conducting means, and the first conducting means and the second conducting means are in parallel.